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10/016,472	12/10/2001	Anthony J. Grzesiak	DKT 00065A (BWI-00056)	4573

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EXAMINER

BURCH, MELODY M

ART UNIT

PAPER NUMBER

3683

DATE MAILED: 12/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/016,472

Applicant(s)

GRZESIAK ET AL.

Examiner

Melody M. Burch

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: element numbers 46, 74, 130, 132, 134, 136, 138, 140, 176. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to because the hydraulic circuit of figure 5 is not drawn with respect to the servo and/or brake band. The circuit of figure 6 is not objected to since it shows the connection of the hydraulic circuit to servo 172 which is disclosed as being equivalent to servo 28. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect may be deferred until after the examiner has considered the proposed drawing correction. Failure to timely submit the proposed drawing correction will result in the abandonment of the application.

### ***Specification***

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction

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of the following is required: The specification lacks proper antecedent basis for the phrase "linkage sensor" as claimed in claim 5.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 14 and 20 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification fails to provide support for shift control based on some of the claimed parameters such as "seat acceleration", "shaft torque", and the "combination" of the claimed parameters as claimed in claim 14. With regards to claim 20, the specification fails to provide support for the use of an accelerometer as an input or the combination of the claimed inputs.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are replete with 112 issues including but not limited to:

Re: claims 1 and 9. The phrase "its speed of rotation" first claimed in the last line of claim 1 is indefinite. It is unclear as to which element "its" refers to.

Re: claim 8. The phrase "an end of the brake band" in lines 2-3 is indefinite. It is unclear to the Examiner whether "an end" in claim 8 is intended to be included as one of the "opposing ends" claimed in claim 1 or if it is intended to be a separate from the ends claimed in claim 1.

Re: claim 9. Claim 9 recites the limitation "the position" in line 7 and "the linkage" in line 9. There is insufficient antecedent basis for the limitations in the claim.

Re: claim 13. Claim 13 recites the limitation "the shift" in line 1. There is insufficient antecedent basis for the limitation in the claim.

Re: claim 15. Claim 15 recites the limitation "said shift control" in line 1. There is insufficient antecedent basis for the limitation in the claim.

Re: claim 18. Claim 18 recites the limitation "said shaft" in line 3. There is insufficient antecedent basis for the limitation in the claim.

Re: claim 19. Claim 19 recites the limitation "said applied position" in line 2. There is insufficient antecedent basis for the limitation in the claim.

Re: claim 20. Claim 20 recites the limitation "the switch" in line 1. There is insufficient antecedent basis for the limitation in the claim. Also the phrase "of these" in the last two lines of the claim is indefinite.

Re: claims 2-8, 10-12, 14, 16, 17, 21, and 22. Claims 2-8, 10-12, 14, 16, 17, 21, 22 and 23 are indefinite due to their dependency on the corresponding independent claims.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claim 1-3, 7, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5752588 to Reichert et al.

Re: claim 1. Reichert et al. show in figure 1 a brake band mechanism for an automatic transmission having a brake drum disclosed in col. 3 line 6, the mechanism comprising: a brake band 14 encircling the brake drum, the brake band including opposing ends the brake band operable to be compressed and expanded around the brake drum, a hydraulic servo shown within element 1, and a linkage 10,11,12 coupled to the servo and the brake band, the servo activating the linkage to provide positive compression and expansion to the band for applying friction to the brake drum to control its speed of rotation.

Re: claims 2, 3, and 7. Reichert et al. show the limitation of the hydraulic servo being a two-stage servo including a first piston 9 and a second piston 3, the first piston being smaller than the second piston, the first piston being operable to provide rapid

movement of the brake band and the second piston being operable to provide fine adjustments of the brake band.

Re: claim 8. Reichert et al. show the limitation of the mechanism further including a clip structure shown in the area of element number 13, the clip structure being mounted to an end of the brake band and being coupled to the linkage via the abutment with element 12 of the linkage.

11. Claim 1-3, 7, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by JP-11264460 (using US Patent 6102825 to Hisano et al. as an English equivalent).

Re: claim 1. Hisano et al. show in figure 1 a brake band mechanism for an automatic transmission having a brake drum 31, the mechanism comprising: a brake band 32 encircling the brake drum, the brake band including opposing ends the brake band operable to be compressed and expanded around the brake drum, a hydraulic servo 4, and a linkage 42,34 coupled to the servo and the brake band, the servo activating the linkage to provide positive compression and expansion to the band for applying friction to the brake drum to control its speed of rotation.

Re: claims 2, 3, and 7. Hisano et al. show the limitation of the hydraulic servo being a two-stage servo including a first piston 43 and a second piston 44, the first piston being smaller than the second piston, the first piston being operable to provide rapid movement of the brake band and the second piston being operable to provide fine adjustments of the brake band.

Re: claim 8. Hisano et al. show the limitation of the mechanism further including a clip structure 33,35, the clip structure being mounted to an end of the brake band and being coupled to the linkage.

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 4, 5, 9-11, 13, 16-21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reichert et al. in view of US Patent 5003842 to Hatta et al. Reichert et al. show in figure 1 a brake band mechanism for an automatic transmission having a brake drum disclosed in col. 3 line 6, the mechanism comprising: a brake band 14 encircling the brake drum, the brake band including opposing ends, the brake band operable to be compressed and expanded around the brake drum, a two-stage hydraulic servo, the two stage servo providing a rapid activation of the linkage during a first stage to rapidly expand the brake band using first piston 9, and a controlled compression and expansion of the brake band during a second stage using second piston 3, and a linkage 11,12 coupled to the servo and the brake band, and a clip structure shown in the area of element 13, the clip structure being mounted to an end of the brake band and being coupled to the linkage by way of the abutment with element 12 of linkage 11,12, the servo activating the linkage to provide positive compression and expansion to the band for applying friction to the brake drum to control its speed of



rotation, but does not include the limitation of a servo rod position sensor for determining the position of a stroke rod of the servo. Hatta et al. teach in figure 5 and in col. 10 lines 29-30 the use of a stroke rod position detecting means in a brake band mechanism. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the servo of Reichert et al. to have included a servo rod position sensor, as taught by Hatta et al., in order to provide a means of detecting the position of the rod of the servo to help determine band compression or expansion.

14. Claims 4, 5, and 13-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP-11264460 to Hisano et al. in view of US Patent 5003842 to Hatta et al.

Re: claims 4, 5, 13, 16-19, 21, and 23. Hisano et al. show in figure 1 a brake band mechanism for an automatic transmission having a brake drum 31, the mechanism comprising: a brake band 32 encircling the brake drum, the brake band including opposing ends, the brake band operable to be compressed and expanded around the brake drum, a two-stage hydraulic servo, the two stage servo providing a rapid activation of the linkage during a first stage to rapidly expand the brake band using first piston 43, and a controlled compression and expansion of the brake band during a second stage using second piston 44, and a linkage 34,42 coupled to the servo and the brake band, and a clip structure 33,35, the clip structure being mounted to an end of the brake band and being coupled to the linkage, the servo activating the linkage to provide positive compression and expansion to the band for applying friction to the brake drum

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to control its speed of rotation, but does not include the limitation of a servo rod position sensor for determining the position of a stroke rod of the servo. Hatta et al. teach in figure 5 and in col. 10 lines 29-30 the use of a stroke rod position detecting means in a brake band mechanism. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the servo of Hisano et al. to have included a servo rod position sensor, as taught by Hatta et al., in order to provide a means of detecting the position of the rod of the servo to help determine band compression or expansion.

Re: claims 14 and 20. Hisano et al. disclose in col. 7 lines 22-30 the limitation of shift parameters being based on band strain, seat acceleration, shaft torque or a combination of these or particularly shaft torque (from the turbine rotation speed sensor).

Re: claims 15 and 22. Hisano et al. show in figure 1 the use of shift control accomplished by way of control of an apply solenoid 55.

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15. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reichert et al. in view of US Patent 4070981 to Guinn et al. Guinn et al. teach in figure 3 the use of a strain sensor 28 associated with a band brake 30. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the brake band mechanism of Reichert et al. to have included a strain sensor, as taught by Guinn et al., in order to provide a means of detecting the compression and expansion of the band brake device.

16. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP-11264460 in view of US Patent 4070981 to Guinn et al. Guinn et al. teach in figure 3 the use of a strain sensor 28 associated with a band brake 30. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the brake band mechanism of Hisano et al. to have included a strain sensor, as taught by Guinn et al., in order to provide a means of detecting the compression and expansion of the band brake device.

17. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reichert et al. in view of US Patent 5003842 to Hatta et al. as applied to claim 9 above, and further in view of Guinn et al. Guinn et al. teach in figure 3 the use of a strain sensor 28 associated with a band brake 30. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the brake band mechanism of Reichert et al. to have included a strain sensor, as taught by Guinn et al., as modified, in order to provide a means of detecting the compression and expansion of the band brake device.

***Conclusion***

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents: 5881858 to Tsukamoto et al., 6110068 to Kraska, 5445246 to Haka et al., 4388986 to Umezawa, 5588928 to Koivunen, 6220402 to Tsutsui et al., 4930373 to Nakawaki et al., 6422356 to Suzuki et al., 4360092 to Muller et al., 6053834 to Savoyard et al., 6074319 to Sato et al., 2513192 to McFarland, 6260671 to Fujita, 3004390 to Duffy, 3103991 to Flinn, 2409506 to McFarland, and JP-3194249 teach similar brake band inventions and 5711403 to Sparks et al. teaches the use of a rapid apply servo for a brake band device.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

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December 24, 2002

*M. C. Graham*  
*12/24/2002*

**MATTHEW C. GRAHAM**  
**PRIMARY EXAMINER**  
**GROUP 310**